

Patent
Attorney's Docket No. 200312186-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
I-Jong LIN) Group Art Unit: 2624
Application No.: 10/718,151) Examiner: Alex Kok Soon Liew
Filed: November 20, 2003) Confirmation No.: 8992
For: METHODS AND SYSTEMS)
FOR PROCESSING)
DISPLAYED IMAGES)

APPEAL BRIEF PURSUANT TO 37 C.F.R § 41.37

Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

This is an Appeal Brief of the Final Rejection dated April 18, 2008, of Claims 1-25. A Notice of Appeal from this Final Rejection was timely filed on July 18, 2008.

(I) REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee, Hewlett-Packard Company.

(II) RELATED APPEALS AND INTERFERENCES

Appellants' legal representative and Assignee are aware of no appeals which will directly effect or be directly affected by or have any bearing on the Board's decision in this appeal.

(III) STATUS OF CLAIMS

Claims 1-25 stand finally rejected. A clean copy of the pending Claims 1-25 is attached in the Claims Appendix.

(IV) STATUS OF AMENDMENTS

No amendment has been filed after the Final Office Action of April 18, 2008.

(V) SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent Claim 1 is directed to a method (see Figure 4B) for displaying an occlusion of a display on the display, as disclosed in the original specification in paragraph [0024]. The method includes the following steps:

- (i) a step (step 40 in Figure 4B) of generating an image (see Figure 6A) on the display (22 in Figure 2);
- (ii) a step of capturing first contents (the contents are shown in Figure 6B as numerical values of "1") from the image displayed on the display 22 (Figure 2) with an image capture device 20 (also shown in Figure 2). This step is shown as step 42 in Figure 4B and disclosed in the originally filed specification, for example, in paragraph [0030]. The image capture device 20 is spaced away from the display 22 as shown in Figure 2;
- (iii) a step of analyzing the first contents (see paragraph [0024] in the originally filed specification and step 44 in Figure 4B) to identify a first set of potentially occluded pixels (see paragraph [0025] of the originally filed specification that discloses "a pixel-by-pixel analysis of the captured contents relative to corresponding pixels on the display 22");
- (iv) a step of changing a value of the first set of potentially occluded pixels to generate a modified image (see Figure 7A, in which values "0" from Figure 6B of the potentially occluded pixels are replaced by values "R" on the display 22 and also see the originally filed specification, for example, paragraph [0031]);

(v) a step of capturing second contents (shown in Figure 7B) from the modified image (see Figure 7A) displayed on the display 22 with the image capture device 20 (see paragraph [0031], first six lines, in the originally filed specification and step 42 in Figure 4B);

(vi) a step of selectively confirming the first set of potentially occluded pixels as confirmed pixels based on the second contents, as disclosed, for example, in the originally filed specification in paragraph [0032]; and

(vii) a step of generating the confirmed occluded pixels (state 36 shown in Figure 3A) on the display 22 using a predetermined display value "R," see also paragraph [0032] of the originally filed specification.

Steps (ii) and (v) recite capturing first contents and capturing second contents, respectively, and the claim positively recites that these steps are performed by the image capture device 20 based on images displayed on the display 22, as shown in Figure 2 and disclosed in the originally filed specification, for example, in paragraph [0022], lines 3-7.

Independent Claim 7 recites a step of passively testing a first version of a displayed image, as shown for example in Figure 4A, step 400 and a step of actively testing a portion of the displayed image as shown, for example, in Figure 4A, step 410. The passively testing step determines if the portion of the displayed image is blocked from the image capture device 20 as disclosed, for example, in the originally filed specification in paragraph [0024], lines 3-6 and paragraph [0026], lines 1-6. The

actively testing step confirms, based on the first version of the displayed image (see paragraph [0026], lines 6-9) and a second version of the displayed image, whether the portion of the displayed image is blocked from the image capture device 20, see for example, the originally filed specification in paragraph [0024] and paragraph [0026], lines 9-20. The second version of the displayed image is captured by the image capture device 20 after being displayed on the display 22 as disclosed, for example, in paragraph [0024], lines 13-14. Claim 7 recites similar to Claim 1, using the image capture device 20 for capturing the contents of various images displayed on the display 22.

Independent Claim 13, although different from Claim 7, recites similar steps to Claim 7, i.e., passively testing and actively testing contents based on images captured by the image capture device 20 from the display 22.

Independent Claim 19, although different from independent Claim 7, recites that a processor (24 shown in Figure 2) of an image processing system performs the steps discussed above with regard to independent Claim 7. In addition, Claim 19 recites a display (22 in Figure 2) for displaying an image and an image capture device (20 in Figure 2) for capturing first and second versions of the displayed image.

Independent Claim 25 is directed to an image processing system and is similar to independent Claim 19 but it is written in means plus function language. The means plus function elements of Claim 25 are clearly identified in independent Claim 19 as being the display 22, the image capture device 20, and the processor 24, all shown for

example in Figure 2.

Claim 5 depends from Claim 1 and recites a step of identifying display pixels within a predetermined distance of the confirmed occluded pixels as a second set of potentially occluded pixels (see paragraph [0027], lines 9-13), a step of changing a value of the second set of potentially occluded pixels on the display to a reserved value (see paragraphs [0028] and [0032]), a step of capturing third contents of the display using the image capture device (see paragraph [0032], lines 4 and 5), and a step of selectively confirming the second set of potentially occluded pixels as confirmed occluded pixels based on the third contents (see paragraph [0032], last four lines).

(VI) GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

Appellants respectfully request the Board to review on this appeal (i) the rejection of Claims 1-4, 6-9, 11-15, 17-21, and 23-25 under 35 U.S.C. § 103(a) as unpatentable over Tomasi (U.S. Patent No. 7,212,663) in view of Prakash et al. (U.S. Patent Application Publication No. US 2002/0131495, herein "Prakash") and Chen (U.S. Patent No. 6,556,704), (ii) the rejection of Claims 10, 16, and 22 under 35 U.S.C. § 103(a) as unpatentable over Tomasi in view of Prakash, Chen and Overton (U.S. Patent Application Publication No. US 2003/0012409), and (iii) the rejection of Claim 5 under 35 U.S.C. § 103(a) as unpatentable over Tomasi, Prakash, Chen, and Bilbrey (U.S. Patent No. 6,020,931).

(VII) ARGUMENT

A. The rejection of Claims 1-4, 6-9, 11-15, 17-21, and 23-25 under 35 U.S.C. § 103(a) as unpatentable over Tomasi, Prakash and Chen is improper for various reasons

A.1 Prakash does not teach or suggest generating images on a display and capturing contents of the generated images with an image capture device

The subject matter of independent Claim 1 has been discussed above.

Turning to the applied art, Prakash discloses a method of filling exposed areas in digital images. In this regard, Prakash discloses in paragraph [0004] that:

In the context of video compression since a number of the same objects move around in a scene spanning several video frames, one attempts to create shortcuts for describing a current video frame being encoded or compressed in relation to other video frames that have already been transmitted or stored in the bit stream through a process of identification of portions of the current frame w/other [sic] portions of previously sent frames.

Prakash also discloses in the same paragraph that “[t]his process is known as motion compensation” and the process is used in such technologies as MPEG.

However, one of ordinary skill in the art would recognize, based on this description of Prakash, that motion compensation and technologies such as MPEG do not display an image on a display to be captured by an image capture device but rather employ a processor for performing encoding or compression processes on each frame to determine and transmit only the movement on an object in a frame relative to a

previous frame without transmitting the whole frame. The routines disclosed by Prakash aim to transmit a sequence of video frames at a faster rate by transmitting only the changes in consecutive frames and not the whole frame. Thus, the routines of Prakash cannot be adapted to display each frame on a display, modify the contents of the displayed image, and capture the modified contents as this process will slow down the transmission of frames.

These differences between the claimed invention and Prakash is highlighted by Prakash, for example, in paragraph [0028], in which Prakash states that "[i]n order to efficiently encode this newly uncovered area [the newly uncovered area is exposed by a moving object], it would be desirable to approximate the color of the newly uncovered region by extending the characteristics of it [sic] neighbors (emphasis added). In this regard, Prakash shows in Figure 4A an object 408 that moves relative to two different regions 404 and 406. Thus, in Figure 4B, a new pixel 499 is uncovered by the movement of the object 408 and the method of Prakash aims to approximate the colors of the uncovered area 410 shown in Figure 4C.

Prakash further discloses in the same paragraph [0028] that the colors of the uncovered area 410 are determined based on "extending the characteristics of it neighbors," i.e., areas 404 and 406.

In addition, Prakash discloses in paragraph [0029] that Figure 2D "illustrates a poor approximation of the exposed area that can be produced if it is filled using information from surrounding segments without determining which of these segments

most closely resemble the color values of the exposed area." Further, Prakash discloses in paragraph [0050] that "[f]ollowing the identification of the boundary segments [neighboring areas], a routine is carried out that fills the exposed area using the color values of all of the boundary segments." Furthermore, Prakash discloses in paragraph [0051] that "[a]n image frame with an exposed area is an intermediate step in the process of reconstructing an image frame from the previous frame" and "[t]his situation occurs when an image segment has moved but the information regarding the color of the exposed area is not available" (emphasis added).

Thus, Prakash discloses that when the object 408 moves relative to areas 404 and 406 to expose area 410 as shown in Figures 4A-4C, the color of the exposed area 410 is unknown and this color has to be filled in by various routines by taking into account the colors of the neighboring areas 404 and 406.

The statement of Prakash, that after the movement of the segment 408 the color of the area 410 is unknown, clearly shows that there is no image capture device to capture the exposed area 410 and its colors because otherwise, the color of area 410 would be known as soon as object 408 has moved.

Therefore, Prakash discloses a method for filling in colors or other characteristics of an exposed area when an object moves and reveals the exposed area and the routines used by Prakash are based on the characteristics of the neighboring areas of the exposed area and not based on using an image capture device that is able to capture the characteristics of the exposed area.

Thus, it is respectfully submitted that Prakash does not teach or suggest capturing the contents of an image using an image capture device from a display, as recited in steps (ii) and (v) of Claim 1 and generating a modified image on the display as recited in step (iv) of Claim 1.

A.2. The combination of Tomasi with Prakash is improper as they teach away from each other

As discussed above, Prakash discloses a method for filing in colors of an area that is uncovered by a moving object, based on colors of the neighboring areas. Thus, the method of Prakash does not need an image capture device for obtaining the colors of the uncovered area as the processor evaluates the colors of the uncovered area based on the colors of the neighboring areas.

On the contrary, Tomasi, which is the primary reference used by the Final Office Action in the § 103 rejections, shows in Figure 1 displaying an image 102 and using an image capture device 120 to capture the displayed image 102 for determining various characteristics of the displayed image.

Thus, it is respectfully submitted that one of ordinary skill in the art, when faced with combining the teachings of Tomasi with the teachings of Prakash as suggested by the Final Office Action, would not know how to modify Tomasi based on Prakash. In this regard, Tomasi clearly discloses that the content displayed on the display is captured by an image capture device to determine various characteristics of the

displayed image while Prakash uses various routines for guessing those characteristics. Thus, Prakash teaches away from using a camera for detecting the characteristics disclosed by Tomasi.

In other words, the two references do not identify and solve the same problems, as required under a proper 103(a) analysis. In effect, the Final Office Action does little more than attempt to show that parts of the inventive combination of Claim 1 were individually known in other arts and to suggest that such a showing is all that is necessary to establish a valid case of *prima facie* obviousness. The PTO reviewing court recently reviewed such a rationale and dismissed it in *In re Rouffet*, 149 F. 3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) as follows:

As this court has stated, "virtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983); see also *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 USPQ 8, 12 (Fed. Cir. 1983) ("Most, if not all, inventions are combinations and mostly of old elements."). Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability." *Sensonics, Inc. v. Aerasonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996). To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. [emphasis added.]

There has been no such showing of those required reasons made in the final rejection.

A.3. The motivation to combine Tomasi with Prakash is unclear

The only motivation provided by the Final Office Action (see page 4, lines 12-15) to combine Tomasi with Prakash states that one skilled in the art "would include step of finding the occluded area and modifying the occluded area because to tracking [sic] an object may lead to blurring the image, predicting future values of pixels will improve quality of image."

Appellants respectfully submit that it is not clear the meaning of the cited paragraph. Thus, for the following discussion, it is supposed that the Final Office Action intended to take the position that the step of finding the occluded area and modifying the occluded area is to be imported from Prakash into Tomasi and also the step of predicting future values of pixels is to be imported from Prakash into Tomasi. If this is true, then it is not clear why one skilled in the art would import these steps (supposing that they are present in Prakash) from Prakash, which does not have an image capture device to capture an image displayed on a screen, into the device of Tomasi because the device of Tomasi, by having the image capture device, would appear to be able to more accurately detect a color of an uncovered area and future values of the pixels than the method of Prakash.

In other words, it is not clear how the two steps of Prakash cited by the Final Office Action would improve at all the device of Tomasi or why this modification is desirable or even possible. Therefore, it appears that the motivation provided by the Final Office Action to combine Tomasi with Prakash is inaccurate and does not have any basis.

A.4. Chen does not teach or suggest confirming occluded pixels

The Final Office Action recognizes on page 4, lines 15-17, that Prakash "does not disclose selectively confirming said first set potentially occluded pixels as confirmed occluded pixels based on said second contents and capturing contents for the second time." To remedy these deficiencies of Tomasi and Prakash, the Final Office Action relies on Chen for disclosing these features.

The Final Office Action indicates that Figure 1 of Chen shows a top image that corresponds to the claimed first image contents and a bottom image that corresponds to the claimed second image contents, and Chen also discloses at column 6, lines 53-67 and at column 7, line 1, "selectively confirming first set of potentially occluded pixels based on the second contents." In addition, the Final Office Action makes the statement that "the person in the image [of Chen] is read as the occluded pixels."

Chen shows in Figure 1 a device for forming a depth image. More specifically, Chen shows in Figure 1 that two cameras 11A and 11B are used to take images 13A

and 13B of a same person from different perspectives, at the same time. The information from the two images is combined to generate a depth image of the person.

Thus, it is not clear why the person shown as 14A or 14B in images 13A and 13B in Figure 1 corresponds to the claimed occluded pixels as Chen clearly shows that the same person appears in both images but from different perspectives and this person is not occluded by anything.

Further, the technique shown by Chen in Figure 1, i.e., using two different cameras 11A and 11B to obtain images of the same object from two different angles for generating a depth image has nothing to do with occluded pixels.

In addition, the Final Office Action asserts that the top image of Chen corresponds to the claimed first image contents and the bottom image of Chen corresponds to the claimed second image contents. However, based on these assertions of the Final Office Action and because the claimed second contents correspond to the modified first contents, the bottom image in Chen should be an image of a modified top image, which is not the case as two different cameras 11A and 11B are used to generate the two images based on the same object.

Therefore, Chen does not teach or suggest that the top image in Figure 1 corresponds to the claimed first image contents and the bottom image in the same figure corresponds to the claimed second image contents.

A.5. The combination of Chen with Tomasi and Prakash is improper

The Final Office Action states in the paragraph bridging pages 4 and 5, last four lines, that one skilled in the art "would include selectively confirming first set of potentially occluded pixels and generating said confirming occluded pixels of second image content because to create a three dimensional image of the object image, where more details are shown improving [sic] details of the image."

Appellants respectfully submit that it is not clear what is the relation between the occluded pixels and a three-dimensional image as discussed above with regard to Chen. Although Chen shows more details by taking two pictures from different angles of the same object, neither Tomasi nor Prakash takes different images of the same object. In addition, Prakash does not take any image of a given object but rather processes successive frames in a sequence of frames.

B. The rejection of Claims 10, 16, and 22 under 35 U.S.C. § 103(a) as unpatentable over Tomasi, Prakash, Chen, and Overton is improper

The rejection of dependent Claims 10, 16, and 22 is based on the combination of Tomasi, Prakash, and Chen, which was discussed above to be improper. Thus, it is respectfully submitted that the rejection based on Tomasi, Prakash, Chen and Overton is improper at least for the reasons discussed in the above section.

C. The rejection of Claim 5 under 35 U.S.C. § 103(a) as unpatentable over
Tomasi, Prakash, Chen, and Bilbrey is improper as Bilbrey does not teach or
suggest capturing third contents of a display

The Final Office Action asserts on page 8, first paragraph, that "Chen does not disclose capturing third contents of said display using said image capture device." To cure this deficiency of the applied art, the Final Office Action relies on Bilbrey, which appears to disclose using more than three cameras for taking images of a person from a plurality of perspectives (see Figure 54). In this regard, Bilbrey is similar to Chen, i.e., uses various image capture devices to take images of a same object, which is not displayed on a display.

However, the claims recite an image capture device capturing the contents of various images displayed on a display, which is not disclosed by Bilbrey. In addition, the claims recite that the image including the third contents is based on the captured second contents, which are modified to generate the third contents. Bilbrey only disclosed capturing contents from a same scene (person) and not from a modified previous scene.

Thus, it is respectfully submitted that the teachings of Bilbrey do not cure the above noted deficiencies of the applied art with regard to Claim 5.

Conclusions

As the Examiner has failed to establish any reasonable motivation to combine the references and even if they could, for some unknown reason, be combined, the reference teachings would fail to suggest all the limitations of the rejected claims and thus, the reversal of all outstanding rejections is respectfully requested.

Respectfully submitted,

POTOMAC PATENT GROUP PLLC

By: /Remus F. Fetea/

Remus F. Fetea, Ph.D.
Registration No. 59,140

Dated: September 18, 2008

(VIII) CLAIMS APPENDIX

1. A method for displaying an occlusion of a display on said display, comprising the steps of:

generating an image on said display;

capturing first contents from said image displayed on said display with an image capture device, said image capture device being spaced from said display;

analyzing said first contents to identify a first set of potentially occluded pixels;

changing a value of said first set of potentially occluded pixels to generate a modified image on said display;

capturing second contents from said modified image displayed on said display with said image capture device;

selectively confirming said first set potentially occluded pixels as confirmed occluded pixels based on said second contents; and

generating said confirmed occluded pixels on said display using a predetermined display value.

2. The method of claim 1, wherein said step of analyzing said first contents to identify said first set of potentially occluded pixels further comprises the step of:

comparing a value of each pixel of said first contents to a corresponding value of each pixel of said image.

3. The method of claim 2, wherein said display values represent one of a color and an intensity.
4. The method of claim 1, wherein said step of changing a value further comprises the step of:
 - changing said value of said first set of potentially occluded pixels to a reserved value; and
 - regenerating said display using said reserved value for said first set of potentially occluded pixels and image values for remaining pixels.
5. The method of claim 1 further comprising the steps of:
 - identifying display pixels within a predetermined distance of said confirmed occluded pixels as a second set of potentially occluded pixels;
 - changing a value of said second set of potentially occluded pixels on said display to a reserved value;
 - capturing third contents of said display using said image capture device; and
 - selectively confirming said second set of potentially occluded pixels as confirmed occluded pixels based on said third contents.
6. The method of claim 5, wherein said predetermined distance is user selectable.

7. A method for processing a displayed image comprising the steps of:
 - passively testing a first version of said displayed image captured by an image capture device to determine if a portion of said displayed image is blocked from said image capture device; and
 - actively testing said portion of said displayed image based on said first version of said displayed image and a second version of said displayed image to confirm whether said portion of said displayed image is blocked from said image capture device, wherein said second version of said displayed image is captured by said image capture device after being displayed on said display.
8. The method of claim 7, wherein said step of passively testing further comprises the step of:
 - comparing a value of each pixel of said first version of said displayed image captured by said image capture device to a corresponding value of each pixel of said displayed image.
9. The method of claim 7, wherein said step of actively testing further comprises the steps of:
 - changing a display value of said portion of said displayed image to generate said second version of said displayed image;

capturing said second version of said displayed image with said image capture device; and

selectively confirming said portion of said displayed image as occluded based on an analysis of said second version of said displayed image.

10. The method of claim 9, wherein said step of actively testing further comprises the step of:

testing another portion of said displayed image proximate said confirmed portion of said displayed image for occlusion.

11. The method of claim 7, further comprising the step of:

actively testing all of the pixels of said displayed image, prior to said step of passively testing, to initialize an estimate of said displayed image.

12. The method of claim 7, further comprising the step of:

changing a threshold associated with said step of passively testing said first version of said displayed image, based upon a result of said step of actively testing said portion of said displayed image.

13. A computer-readable medium containing a program that performs the steps of:

passively testing a first version of a displayed image captured by an image capture device to determine if a portion of said displayed image is blocked from said image capture device; and

actively testing said portion of said displayed image based on said first version of said displayed image and a second version of said displayed image to confirm whether said portion of said displayed image is blocked from said image capture device, wherein said second version of said displayed image is captured by said image capture device after being displayed on said display.

14. The computer-readable medium of claim 13, wherein said step of passively testing further comprises the step of:

comparing a value of each pixel of said first version of said displayed image captured by said image capture device to a corresponding value of each pixel of said displayed image.

15. The computer-readable medium of claim 13, wherein said step of actively testing further comprises the steps of:

changing a display value of said portion of said displayed image to generate said second version of said displayed image;

capturing said second version of said displayed image with said image capture device; and

selectively confirming said portion of said displayed image as occluded based on an analysis of said second version of said displayed image.

16. The computer-readable medium of claim 15, wherein said step of actively testing further comprises the step of:

testing another portion of said displayed image proximate said confirmed portion of said displayed image for occlusion.

17. The computer-readable medium of claim 13, further comprising the step of:

actively testing all of the pixels of said displayed image, prior to said step of passively testing, to initialize an estimate of said displayed image.

18. The computer-readable medium of claim 13, further comprising the step of:

changing a threshold associated with said step of passively testing said first version of said displayed image, based upon a result of said step of actively testing said portion of said displayed image.

19. An image processing system comprising:

a display for displaying an image;

an image capture device for capturing a first version of said displayed image; and

a processor, connected to said display and said image capture device for passively testing said first version of said displayed image captured by said image capture device to determine if a portion of said displayed image is blocked from said image capture device; and for actively testing said portion of said displayed image based on said first version of said displayed image and a second version of said displayed image to confirm whether said portion of said displayed image is blocked from said image capture device, wherein said second version of said displayed image is captured by said image capture device after being displayed on said display.

20. The system of claim 19, wherein said processor performs said passive testing by comparing a value of each pixel of said version of said displayed image captured by said image capture device to a corresponding value of each pixel of said displayed image.

21. The system of claim 19, wherein said processor performs said active testing by changing a display value of said portion of said displayed image to generate said second version of said displayed image; capturing said second version of said displayed image with said image capture device; and selectively confirming said portion of said displayed image as occluded based on an analysis of said second version of said displayed image.

22. The system of claim 21, wherein said processor performs said active testing by testing another portion of said displayed image proximate said confirmed portion of said displayed image for occlusion.
23. The system of claim 19, wherein said processor also performs active testing prior to said passive testing by actively testing all of the pixels of said displayed image to initialize an estimate of said displayed image.
24. The system of claim 19, wherein said processor also changes a threshold associated with said step of passively testing said first version of said displayed image, based upon a result of said step of actively testing said portion of said displayed image.
25. An image processing system comprising:
 - means for displaying an image;
 - means for capturing a first version of said displayed image; and
 - means, connected to said means for displaying and said means for capturing, for passively testing said first version of said displayed image captured by said means for capturing to determine if a portion of said displayed image is blocked from said means for capturing and for actively testing said portion of said displayed image based on said first version of said displayed image and a second version of said displayed image to confirm whether said portion of said displayed image is blocked from said means for

capturing, wherein said second version of said displayed image is captured by said means for capturing after being displayed on said means for displaying.

(IX) EVIDENCE APPENDIX

None.

(X) **RELATED PROCEEDINGS APPENDIX**

None.